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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/001,596	10/19/2001	Mohammad Thudor	1171/39672/106	3006

7590 12/19/2003  
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Chicago, IL 60603

EXAMINER

PAIK, SANG YEOP

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 12/19/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/001,596

Applicant(s)

THUDOR ET AL.

Examiner

Sang Y Paik

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 19-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 and 19-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 11, 20, 21 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gradon et al (US 6,349,722).

Gradon et al discloses the breathing assistance apparatus claimed having a humidifier (10) with a water heater plate (9) for humidifying the gas, a controller (11) having programs or instructions to determine various parameters such as temperature, gas flow, humidity level that relate to the flow rate of the gases and to determine and to supply the electrical power necessary to produce the desired humidity, temperature and gas flow. While Gradon et al does not explicitly shows each of the parameter determining steps, the controller which repeatedly obtains the corresponding parameters and monitors the changes in the parameter values with respect to the determined threshold values to enable the controller to further control the water heater to produce the adequate heat to achieve the desired humidity level. Gradon et al further discloses the gas supply means (1) such as a blower and a gas flow rate sensor (19)

3. Claims 1, 2, 11-17, 19, 20 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daniell et al (US 6,050,260).

Daniell et al '260 discloses the breathing assistance apparatus claimed having a humidifier (8) with a water heater plate (7) for humidifying the gas with a heater plate sensor (14), a controller (9) having programmed instructions to determine various parameters such as temperature, humidity and pressure that relate to the flow rate of the gases and to determine and to supply the electrical power necessary to produce the desired humidity, a conduit (3) with a conduit heater, a gas supply means having a variable speed fan (21) that is controlled by an electronic controller (18) and a gas flow sensor (13).

While Daniell et al '260 does not explicitly show each of the parameter determining steps, the controller which continuously monitors the changes in the parameter values with respect to the determined threshold values to enable the controller to further control the water heater along with the fan to produce the adequate heat to achieve the desired humidity level. With respect to claims 13 and 14, while an electric motor is not shown to power the variable speed fan, a motor is conventional and well known part of a fan to electrically power the fan blade to create the necessary air flow and the current is the source of electrical power necessary to energize the motor which controls the speed of fan speed via motor. With respect to claim 17, while the parameter defined as the power drawn by the water heater divided by the temperature of the water heater is not shown by Daniell et al '260, such parameter is still proportionally related to the power and temperature of the water heater, and it would have been obvious to one of ordinary skill in the art to use any suitable parameters such as the ratio of the power divided by the temperature or vice versa for the convenience of calculation by the controller as long as such ratio is indicative of the heater condition.

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4. Claims 3-10 and 21-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Daniell et al '260 as applied to claims 1, 2, 11-17, 19, 20 and 36 above, and further in view of Daniell et al (US 5,558,084).

Daniell et al '260 discloses the device claimed except a sensor for sensing the exterior ambient temperature.

Daniell et al '084 shows a breathing apparatus having an ambient temperature sensor to sense and to indicate the exterior ambient temperature so as to further adjust a heating element in accordance to the ambient temperature sensor to prevent the condensation of the humidified gases. In view of Daniell et al '084, it would have been obvious to one of ordinary skill in the art to adapt Daniell et al '260 with an exterior ambient sensor to measure the exterior temperature to further supply the power, which comprises voltage and current signals, and to control the heating elements including the conduit heater to prevent the condensation of the humidified gases.

With respect to claim 4, Daniell et al '260 shows that the parameters such as temperature and pressure are also monitored by the controller with respect to time (see column 5, line 28 to column 6, line 11). With respect to claim 5, Daniell et al '260 shows that the various parameters relating to the flow rate of the gas are continuously monitored by a controller. Having the controller to delay or pause would have been obvious for the humidifier to make the necessary adjustments such to increasing or decrease the power output of the heating elements or the fan speed to produce the humidified gas having the parameters which would then be monitored by the controller.

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***Response to Arguments***

5. Applicant's arguments with respect to claims 1-17 and 19-36 have been considered but are moot in view of the new ground(s) of rejection.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sang Y Paik whose telephone number is 703-308-1147. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0861.

S. Y. Paik

Sang Y Paik  
Primary Examiner  
Art Unit 3742

syp